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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,778	02/20/2002	Yoshinobu Higuchi	1450.1015	5137

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EXAMINER

PEUGH, BRIAN R

ART UNIT	PAPER NUMBER
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2187

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/077,778

Applicant(s)

HIGUCHI ET AL.

Examiner

Brian R. Peugh

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 26-47 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 26-37 is/are allowed.
6) ☒ Claim(s) 1 is/are rejected.
7) ☒ Claim(s) 2-17 and 38-47 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 20 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 5/18/05.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

AD

DETAILED ACTION

Response to Amendment

This Office Action is in response to applicant's communication filed March 8, 2005, in response to PTO Office Action dated September 8, 2004. The applicant's remarks and amendment to the specification and/or claims were considered with the results that follow.

Claims 1-17 and 26-47 have been presented for examination in this application. In response to the last Office Action, claims 1-17 and 26-38 have been amended. Claims 39-47 have been added.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a plurality of said non-volatile and said volatile memories" (claim 40, line 2) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1-17 and 38-47 are objected to because of the following informalities:

Regarding claim 1, line 12: The claim recites "the exterior". The "exterior" had not been previously claimed, although the Examiner believes that "the exterior" corresponds to the external bus, and encourages the Applicant to amend the claim in order to facilitate proper antecedent basis.

Claim 39 recites the limitation "the plurality of memories" in lines 1-2. A "plurality of memories" had not been previously recited, although the Examiner believes that "the plurality of memories" corresponds to the volatile memory and nonvolatile memory of claim. The Examiner encourages the Applicant to amend the claim in order to facilitate proper antecedent basis.

Appropriate correction is required.

Claims 2-17, 38, and 40-47 are objected to as being dependent upon a previously objected claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Irons (US# 6,272,587).

Regarding claim 1, Irons teaches **a memory device comprising: a nonvolatile memory (16) connected to a first memory bus [bus between (16) and (14)] and capable of storing data transmitted thereto through said first memory bus [col. 5, lines 61-64; col. 6, lines 1-4]; a volatile memory [(18); col. 5, lines 1-6] connected to a second memory bus [bus between (16) and (14)], and capable of being random-accessed through said second memory bus [col. 5, lines 61-64; col. 6, lines 1-4]; and a controller (14) having a first internal terminal connected to said first memory bus [although not explicitly detailed, inherently required to connect (14) with first memory bus which is coupled to (16), the nonvolatile memory], a second internal terminal connected to said second memory bus [although not explicitly detailed, inherently required to connect (14) with second memory bus which is coupled to (18), the volatile memory], and an external terminal [although not explicitly detailed, inherently required to connect (14) with ECM inputs (22) bus], connected to an external bus [ECM inputs (22)], said controller for transferring data between said nonvolatile memory and said volatile memory through said first and second internal terminals [col. 5, lines 61-64; col. 6, lines 1-4]; and when the data transfer is not performed, said controller controls access from the exterior to said volatile memory through said external terminal and said second internal terminal, in accordance with an instruction transmitted through said external bus [col. 6, lines 24-28; instructions are provided over ECM inputs to instruction processor (26) of controller (14); col. 5, lines 27-29].**

Allowable Subject Matter

Claims 26-37 are allowed over the prior art of record

Claims 2-17 and 38-47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record teach volatile and nonvolatile memory systems but fail to teach the combination including the limitation of:

(Claim 26) "...a volatile memory including an actual data area for storing a plurality of actual data units and a spare data area for storing a plurality of spare data units";

(Claim 38) "...when said assign signal is input to said assign terminal, said controller performs assignment between said first internal terminal and said external terminal";

(Claim 39) "...wherein said plurality of memories have different operable input/output voltage level ranges".

The prior art of record includes references teaching volatile and non-volatile memory I/O voltage ranges, but fail to teach or provide the necessary motivation for the combination of prior art to read upon the claimed subject matter.

Response to Arguments

Applicant's arguments with respect to claim 1 has been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art corresponds to related volatile and non-volatile memory systems.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Peugh whose telephone number is (571) 272-4199. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Friday's from 7:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks, can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Brian R. Peugh
Patent Examiner
Art Unit 2187
May 27, 2005